

LISTING OF THE CLAIMS

1. (previously presented) Process for the manufacture of polyvinylidene fluoride (PVDF) homopolymer or copolymer comprising synthesizing by radical polymerization of vinylidene fluoride (VDF), and optionally of a comonomer, in aqueous dispersion and in the presence of a transfer agent, of a persulphate as radical initiator, optionally of a surface-active additive and optionally of a paraffin wax, in which:
 - a) sodium acetate is added, either at the start of or during or after the polymerization,
 - b) a potassium alkylsulphonate is optionally added after the polymerization,
 - c) an aqueous PVDF dispersion is obtained,
 - d) the PVDF is collected by atomizing the dispersion obtained in c) with air at a temperature of between 120 and 220°C, the aqueous dispersion obtained in c) not being washed with water before atomising.
2. (original) Process according to Claim 1, in which the surface-active additive is chosen from those of general formula: $ZC_nF_{2n}COOM$ in which Z is a fluorine or chlorine atom, n is an integer with a value from 6 to 13 and M is a hydrogen or alkali metal atom or an ammonium group or an ammonium group comprising at least one lower alkyl substituent.
3. (original) Process according to Claim 1, in which the proportion of sodium acetate is between 50 and 600 ppm with respect to the PVDF manufactured.
4. (currently amended) Process according to Claim 1, in which the potassium alkylsulphonate is chosen from potassium ethylsulphonate, methyl-sulphonate, isopropylsulphonate and or n-propylsulphonate.

5. (original)) Process according to Claim 1, in which the proportion of potassium alkylsulphonate is between 0 and 300 ppm with respect to the PVDF manufactured.

6. (previously presented) The process of Claim 1 wherein said radical polymerization process is a batchwise or semi-continuous process for the manufacture of PVDF homopolymer or copolymer, comprising the steps of:

- charging the polymerization reactor with water, the optional surface-active additive and optionally a paraffin wax,
- deaerating the reactor to remove the oxygen,
- bringing the reactor to the chosen temperature and VDF and the optional monomer are charged until the desired pressure is reached,
- introducing the transfer agent into the reactor, either in its entirety or partly at the start of and partly during the polymerization,
- adding sodium acetate all at once or on several occasions, either at the start of or during or after the polymerization,
- adding the persulphate (the initiator) in its entirety or in part, to start the polymerization and the fall in pressure which results therefrom is compensated for by the addition of VDF and of the optional comonomer,
- adding the possible remaining initiator during the polymerization,
- degassing the reactor and obtaining an aqueous PVDF dispersion after introduction of the planned amount of VDF and of optional comonomer,
- adding, optionally, a potassium alkylsulphonate, and
- introducing the aqueous PVDF dispersion into an atomizer with air at a temperature of between 120 and 220°C and the PVDF powder is collected.

7-11 (canceled)